

# **WASTEWATER TRAINING DIRECTORY**

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State Water Resources Control Board  
California Environmental Protection Agency

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## Introduction

### **W**hy Is Training So Critical?

In California, all prospective wastewater treatment plant operators must demonstrate to the State Water Resources Control Board (SWRCB), Office of Operator Certification (OOC) that they have successfully taken technical training. In fact, before an applicant is even allowed to take an examination, they must document their training by sending college transcripts, diplomas or training certificates to the OOC.

Depending on grade level, prospective operators must have specific levels of training. In some cases, this means college classes; in others it means seminars or in-house programs. Several grades have more than one possible path to satisfy the requirements.

### **W**hat Is The SWRCB's Authority?

Water Code Section 13629 authorizes the SWRCB to approve courses of instruction at higher educational institutions. The section also gives the SWRCB authority to approve courses of instruction given by professional associations, or other nonprofit private or public agencies, if they are equivalent to courses of instruction given by higher educational institutions. Upon request, the SWRCB will assign educational points to approved courses.

Based on Section 13629, the SWRCB may not assign educational points to private, for-profit companies. However, public or private nonprofit agencies may sponsor these types of companies to provide training. The SWRCB will review the curriculum and, if appropriate, assign educational points in such instances.

Sections 3683-3686, Title 23, of the California Code of Regulations specify the education requirements and set out the method used by the SWRCB to calculate educational points.

### **W**hat Are The Requirements?

Please refer to the table "REQUIREMENTS BY GRADE" at the end of this introduction for a list of education and experience requirements for Grades I through V. NOTE: These requirements are in addition to passing the appropriate Grade level examination.

### **Educational Points Versus Semester Units**

You may have noticed that sometimes we specify educational points and sometimes semester units. The difference is important. Applicants may convert semester units to educational points, but not the reverse. Where the regulations specify semester units, they must be completed in an accredited college or university. College and university courses completed on a quarter system are prorated.

Section 3685 of the regulations authorizes the SWRCB to grant educational points as follows:

- (1) One three-unit semester course, which is directly related to wastewater treatment, is equal to eight educational points.
- (2) All other courses will be assigned educational points at the rate of one educational point per 10 hours of completed classroom instruction. Subjects that are directly related to wastewater treatment receive full credit for educational points. Subjects that are indirectly related are given one-half credit. Examples of indirectly related courses include mathematics, chemistry, and biological sciences.
- (3) One Continuing Education Unit that is directly related to wastewater treatment is equal to one educational point.

### **High School Equivalency**

Applicants may substitute six educational points for each uncompleted year of high school or by passing an approved General Educational Development (GED) test or by obtaining a Certificate of Proficiency issued by the California Board of Education.

### **Experience Credits**

With the exception of Grade I and Path 1 of Grade IV, applicants may substitute 16 educational points for one year of experience. This is in addition to any education required for the grade. For example, someone at Grade II can use 22 points and one year of experience to be certified. However, once the 16 points are used to substitute for experience, they cannot be used again to substitute for experience at another grade.

**W**hat Is In This Directory?

### **Community Colleges**

Community colleges that offer certificate programs in wastewater are given a prominent place in this directory. Community colleges offering only a few wastewater courses are listed separately. The prospective wastewater treatment plant operator should not confuse community college certification with certification by the OOC. A typical community college certification program requires the student to complete a program of study totaling some 23 to 28 units in wastewater and related topics. Certification by the State of California requires the qualified individual to pass an examination, which is offered each April and October.

Even though the community college in your area may not be listed, it is wise to inquire at that college. Wastewater programs are in a continual state of change. Demand for courses and budget constraints often dictate scheduled offerings.

## **Universities**

California State University, Sacramento, offers a series of home-study wastewater manuals and videos. These provide an excellent alternative for those individuals who are unable to attend a community college or cannot find such courses offered in their vicinity. The individual taking these courses should also consider arranging tours of local wastewater treatment plants. In addition to diagrams, pictures and videos, on-site observations would be useful.

The UC Riverside Extension Program offers a course in Industrial Wastewater Technology. The curriculum covers a variety of topics including tours to pre-treatment and wastewater treatment facilities.

## **Nonprofit Organizations and Associations**

Most wastewater professionals are familiar with the various regional and statewide training conferences sponsored by the California Water Environment Association (CWEA). But one should not forget that there are also 16 local CWEA sections, many of which provide wastewater training seminars. You should check with your local CWEA section regarding the availability of such training sessions. Other Associations including the California Rural Water Association also provides excellent opportunities. Interested participants should contact the organizations at the telephone numbers listed in this directory.

## **Private Companies**

Private companies involved in wastewater training offer a different approach to training compared to community colleges and universities. Private companies offer courses that are much shorter (2 to 4 days) and are very intense as compared to the traditional semester-long course. Short courses can reinforce previously learned material and provide updates on new technology. Another difference is that generally, only private companies offer short courses devoted strictly to wastewater certification examination review.

The SWRCB makes no claim that the list of private firms is exhaustive. We have attempted to include those firms that have expressed interest to the OOC. However, there are at least two important considerations to keep in mind before you decide to take a wastewater training course offered by a private company or trainer. First, if educational points are important to you, make sure you inquire about them. Check with the OOC to verify educational points will be awarded for a course you are considering.

Second, it is buyer beware! As thoroughly as possible check out the companies and individual trainers offering wastewater training courses just as you would when purchasing any other product or service. Important considerations in checking out a wastewater course are the qualifications and reputation of the instructor presenting the training. Request names and telephone numbers of individuals who have previously taken training courses from these companies or trainers. Contact these references. Seek the opinion of other wastewater treatment plant operators who have taken courses from these trainers. Request course descriptions, outlines, and other literature that is available regarding the specific course in which you are interested. Only after all this information is obtained is the individual in a position to make an educated choice.

There are, of course, wastewater equipment vendors that routinely offer training in conjunction with the sale of their equipment. This training may be offered on-site, in a factory, or at another wastewater treatment plant that has purchased the vendor's equipment. This type of training is not included in this directory. Engineering firms providing site-specific training in the operation of wastewater unit processes are likewise not included in this directory.

### **Alternative Training and Experience Opportunities**

How does one get into the wastewater field? Being hired as an operator-in-training (OIT) is one pathway. Alternatively, there are a limited number of special programs. The prospective operator should be aware that in each instance, an OIT certificate will be required by the OOC.

One alternative is to be a volunteer wastewater plant treatment operator. Currently, the City of Riverside has a formal volunteer program in place. It would be wise for the individual seeking wastewater experience to inquire at nearby treatment plants regarding the possibility of such a program. Although there is no promise of a job upon successful completion of a volunteer program, the individual gains valuable experience and certainly would have a better opportunity of getting hired by either the agency where the volunteer work is completed or at another agency.

A regional occupational program (ROP) is another alternative program that allows individuals the opportunity to obtain wastewater experience and an education at the same time. Although only the Tri-Valley ROP is mentioned in this directory, the individual should inquire at either high schools or community colleges as to the availability of other programs. An ROP, likewise, does not promise a job upon its successful completion.

Apprenticeship programs are yet another alternative pathway that allows individuals to gain both experience and get an education at the same time. As with the other alternative pathways into the wastewater field, the individual should inquire as to the availability of such programs in their area.

**W**here To Go For More Information?

This guide provides an overview of the requirements contained in both the Water Code and Title 23, Code of California Regulations and lists opportunities to satisfy those requirements. For additional information, please contact:

Office of Operator Certification  
Division of Clean Water Programs  
State Water Resources Control Board  
Post Office Box 944212  
Sacramento, CA 94244-2 120  
(916) 227-4300

<b>REQUIREMENTS BY GRADE</b>			
Path 1	6 educational points	<b>Grade I</b> and	1 year performing duties of operator
Path 1	High School or equivalent and 6 educational points	<b>Grade II</b> and	2 years performing duties of operator
Path 2			1 ½ years as Grade I
Path 1	Associate degree or 60 college semester units including 15 semester units of basic science courses	<b>Grade III</b> and	2 years performing duties of operator
Path 2	High School or equivalent and 16 educational points	and	4 years performing duties of operator
Path 3			3 years as Grade II
Path 1	Bachelor's degree with a major related to wastewater treatment including 30 semester units of basic science courses	<b>Grade IV</b> and	2 years performing duties of operator
Path 2	Associate degree or 60 college semester units including 15 semester units of basic science courses	and	4 years performing duties of operator
Path 3	High School or equivalent and 32 educational points	and	6 years performing duties of operator
Path 4			4 years as Grade III
Path 1	Valid license as a civil or chemical engineer issued by the California Board of Registration for Professional Engineers and Land Surveyors	<b>Grade V</b> and	4 years performing duties of operator
Path 2	Bachelor's degree with a major related to wastewater treatment including 30 semester units of basic science courses	and	5 years performing duties of operator
Path 3	Associate degree or 60 college semester units including 15 semester units of basic science courses	and	6 years performing duties of operator
Path 4	High School or equivalent and 48 educational points	and	10 years performing duties of operator
Path 5			6 years as Grade IV

## Community Colleges Offering Wastewater Certificate or Degree Programs

	<u>Contact</u>	<u>Telephone</u>
<u>Hartnell College</u> 156 Homestead Avenue Salinas, CA 93901 <a href="http://www.coc.cc.ca.us">http://www.coc.cc.ca.us</a>	Dr. John Totten, Dean Math and Science Department	(831) 755-6875

### Organization

Hartnell College's Water Technology Program is administered by the Mathematics and Science Department.

### Program Description

Hartnell College's Water Technology Program offers Certificates of Completion in Water Management and Wastewater Management. The Water Technology Program is designed to provide the training necessary to meet the certification requirements for a water treatment operator and the educational requirements for some Wastewater Treatment Plant Operator examinations. The program also provides students with information needed to operate and maintain wastewater collections systems.

To earn this certificate, the student must complete a total of seven courses (22-23 units). The required courses include: "Introduction to Wastewater Treatment", "Advanced Wastewater Treatment", "Water/Wastewater Mathematics", "Water Treatment Chemistry", English, Biology, and one communication course. The recommended electives include: "Introduction to Water Resources", "Water Distribution Systems", "Backflow Testing", "Seminars in Water Technology", and "Introduction to Environmental Hazardous Materials Technology".

### Related Degree Information

Since many of the courses required for the Wastewater Management certificate are also required for the Water Management certificate, one could earn both certificates if so desired. In addition, one could earn an Associate Degree in Wastewater or Water Management by completing the certificate and graduation requirements.



Imperial Valley College  
380 East Aten Road  
Imperial, CA 92251  
<http://www.imperial.cc.ca.us>

Contact  
Gary Rodgers  
Public Safety and  
Services Division

Telephone  
(760) 355-6290  
(760) 355-6217  
Ext. 217

### Organization

Imperial Valley College's Water Treatment Technology Program is currently administered by the Public Safety and Services Division.

### Program Description

Imperial Valley College offers a program of study leading to a certificate of achievement in Wastewater Technology. The goal of this program is to prepare students for a career as a wastewater treatment plant operator or to upgrade the skills of currently employed wastewater treatment plant operators.

To earn this certificate, the student must complete a total of four courses (14 units). The required courses include: "Wastewater Treatment I & II" and "Computational Procedures for Treatment Plant Personnel I & II".

### Related Degree Information

A certificate in Water Technology is also offered and includes courses: "Water Treatment I & II" and "Computational Procedures for Treatment Plant Personnel I & II". Thus, one could easily earn both certificates if so desired. Moreover, the Associate Degree in Water Treatment Technology encompasses the curriculum for both certificates.

Los Angeles Trade-Technical College  
400 West Washington Boulevard  
Los Angeles, CA 90015  
<http://www.lattc.cc.ca.us>

Contact  
Don Misumi, Chair  
Department of  
Mathematics and Science

Telephone  
(213) 744-9087

### Organization

Los Angeles Trade-Technical College's wastewater program is administered by the Department of Science and Mathematics.

### Program Description

Los Angeles Trade-Technical College offers a program of study leading to a certificate in Wastewater Technology. This program provides training both for the individual who is seeking employment in the wastewater field and also for those wastewater treatment plant operators who wish to upgrade their skills.

To earn this certificate, the student must complete a total of seven courses (22 units). The wastewater courses in this certificate program include: "Wastewater Operations I" - Introduction to wastewater, "Wastewater Operations II" - Preliminary, primary and secondary treatment systems, "Wastewater Operations III" - Disinfection and treatment methods, "Wastewater Operations IV" - basic laboratory analysis, "Wastewater Operations V" - Mechanics, fluids and solids, "Wastewater Operations VI" - Public health, and "Water and Wastewater Mathematics".

### Related Degree Information

An Associate Degree in Wastewater Technology can be earned by completing the certificate and graduation requirements.

Palomar College  
1140 West Mission Avenue  
San Marcos, CA 92069  
<http://www.palomar.edu>

Contact  
Donna DeYarman  
Vocational Programs

Telephone  
(760) 744-1150  
Ext. 2284

### Organization

Palomar College's wastewater program is administered by the Department of Vocational Programs.

### Program Description

Palomar College offers a program of study leading to a certificate in Wastewater Technology. This program is designed to develop a general understanding of water pollution control and specific knowledge of mathematics, hydraulics, biology and chemistry as they apply to the field of wastewater treatment technology.

To earn the Wastewater Technology certificate, the student must complete a total of eight courses (24 units) including 9-10 elective units. The core courses required for this certificate include: "Treatment Plant Operations", "Fundamental Chemistry & Laboratory Procedures for Wastewater Treatment Plant Operators", "Wastewater Mathematics", "Instrumentation and Controls", "Supervision", "Collection Systems Operator", "Treatment Process Control" and "Motors and Pumps, Operation and Maintenance". The elective units include: "Microbiology for Wastewater Treatment Plant Operators", "Backflow Prevention", "Basic Hydraulics", "Biological Nutrient Removal AWT", "On-Site Disposal", "Biological Hazards", "Wastewater Technology Education Topics", and "Cooperative Education" (work experience).

### Related Degree Information

An Associate Degree in Wastewater Technology can be earned by completing the certificate and graduation requirements.

Santiago Canyon College  
8045 East Chapman Avenue  
Orange, CA 92869  
<http://www.rancho.cc.ca.us>

Contact  
Dr. James Gates  
Department of  
Environmental Studies

Telephone  
(714) 564-4545

### Organization

Santiago Canyon College's Wastewater/Environmental Sanitation Program is administered by the Department of Environmental Studies.

### Program Description

Santiago Canyon College offers a certificate program in Wastewater/Environmental Sanitation. The goal of this program is to prepare individuals to be wastewater treatment plant operators or environmental sanitation aides. The program enables individuals already in the wastewater field to upgrade their skills.

The core requirements for the certificate include: "Occupational Safety for Utility Workers", "Sewer Facilities Maintenance", "Wastewater Management", "Introduction to Wastewater Treatment Plants", "Advanced Operations of Wastewater Treatment Plants", "Environment and Disease Control", "California Water Resources" and "Pumps and Pumping" (24 units total).

### Related Degree Information

An Associate Degree in Wastewater/Environmental Sanitation can be earned by completing the certificate and graduation requirements. Students may also move into the curriculum at a four-year institution leading to a Baccalaureate Degree by completing the environmental studies degree program.

San Bernardino Valley College  
701 South Mount Vernon Avenue  
San Bernardino, CA 92410  
<http://www.sbccd.cc.ca.us>

Contact  
Rosa Garcia  
Science Division

Telephone  
(909) 888-6511  
Ext. 1693

### Organization

San Bernardino Valley College's water/wastewater curriculum is administered by the Science Division.

### Program Description

San Bernardino Valley College offers a program of study leading to a certificate in Water Supply Engineering. The curriculum is designed to offer pre-service and in-service professional training in the water supply and reclamation industry. Students receive technical instruction in domestic water supply and wastewater treatment. The courses are sequenced to prepare students for the state licensing exam.

To earn a Water Supply Engineering certificate, the student must complete total of 25-26 units from the following courses: "Introductory Chemistry", "Elementary Algebra" or "Pre Algebra", "Water Utilities Distribution I & II", "Water Quality and Basic Domestic Water Treatment", "Advanced Domestic Water and Industrial Water Treatment", "Cross Connection Control and Water Safety Engineering", "Backflow Prevention Devices", "Wastewater Treatment Operations I & II", "Computer Literacy", "Using the IBM PC" and "Using the Macintosh".

### Related Degree Information

An Associate Degree in Water Supply Engineering may be offered in the Fall of 1999.

San Diego Mesa College  
7250 Mesa College Drive  
San Diego, CA 92111  
<http://intergate.sdccd.cc.ca.us>

Contact  
Albert Taccone, Dean  
School of Business,  
Computer Studies and  
Technology

Telephone  
(619) 627-2803

### Organization

San Diego Mesa College's wastewater program is administered by the Water/Wastewater Technology Department.

### Program Description

San Diego Mesa College offers a program of study leading to a certificate in Water/Wastewater Technology: Wastewater Treatment Plant Option. The wastewater technology program provides pre-employment training as well as advanced courses in wastewater technology for those wishing career advancement. Special topic courses prepare students for State of California wastewater plant operator certification exams. Two other options also available include: Distribution/Collection System Option and Water Treatment Plant Option.

The core requirements for all three options include: "Fundamentals of Water and Wastewater", "Calculations in Water and Wastewater", "Basic Hydraulics", "Introduction to Electrical & Instrumental Processes" (12 units total). The additional courses for the Wastewater Treatment Option include: "Laboratory Analysis for Water & Wastewater", "Basic Plant Operation - Wastewater", "Advanced Plant Operation Wastewater Treatment" (9 units total).

### Related Degree Information

An Associate Degree can be earned in Water/Wastewater Technology by completing one of the certificate options and the graduation requirements.

Santa Barbara City College  
721 Cliff Drive  
Santa Barbara, CA 93109  
<http://www.sbccc.cc.ca.us>

Contact  
Jerry Sortomme, Chair  
Water Science Department

Telephone  
(805) 965-0581  
Ext. 2244

### Organization

Santa Barbara City College's wastewater program is administered by the Water Science Department.

### Program Description

Santa Barbara City College offers a program of study leading to certificates of achievement in Water Science: Wastewater Collection Option and Water Science: Wastewater Treatment Option. The program goal is to qualify students to operate wastewater facilities in accordance with state and federal regulations. Courses are designed to prepare students to take state exams. Certificate options for Water Distribution and Water Treatment are also available.

The core courses for the Wastewater Collection Option are: "Introductory Microbiology", "Math for Technologies", "Wastewater Treatment", "Water Quality Protection & Cross Connect Control" and "Water and Wastewater Hydraulics". The Core Courses for the Wastewater Treatment Option are: "Introductory Microbiology", "Math for Technologies", "Wastewater Treatment" and "Water Chemistry and Bacteriology".

### Related Degree Information

The Associate degree is not available with this certificate program.

Shasta College  
PO Box 496006  
Redding, CA 96049-6006  
<http://www.shasta.cc.ca.us>

Contact  
John Jardin  
Center for Science, Industry  
and Natural Resources

Telephone  
(530) 378-6700

### Organization

Shasta College's wastewater program is administered by the Center for Science, Industry and Natural Resources.

### Program Description

Shasta College offers a program of study leading to a certificate in Water/Wastewater Treatment. This program is designed to provide entry-level training and upgrading for California water/wastewater public and private agency operators. It is suggested that students seeking an introduction into either the water or wastewater field would benefit by taking the entire program.

To earn the Wastewater certificate, the student must complete six courses that total 18 units. The courses required are: "Introduction to Wastewater Treatment", "Introduction to Water Treatment Technology", "Intermediate Water Treatment Technology", "Intermediate Wastewater Treatment", "Advanced Wastewater Treatment", and "Small Water Systems and Distribution". Completion of Basic Algebra 101 and General Chemistry 2a before completing the certificate requirements is strongly recommended.

### Related Degree Information

An Associate Degree can be earned by completing the certificate and graduation requirements.



Solano College  
4000 Suisun Valley Road  
Suisun, CA 94585  
<http://www.solano.cc.ca.us>

Contact  
Kaye Locatelli  
Technical Trades  
Department

Telephone  
(707) 864-7221  
(707) 864-7155

### Organization

Solano College's wastewater program is administered by the Technical Trades Department.

### Program Description

Solano College offers a program of study leading to a certificate of achievement as a Water and Wastewater Technician. The goal of this program is to prepare students for a career as a Water and Wastewater Technician or upgrade their skills if they are currently employed in the wastewater field. Program courses will satisfy most of the requirements for certification of water and wastewater personnel.

To earn this certificate, the student must complete a total of eight courses (28.5 units). The wastewater courses in this certificate program include: "Introduction to Wastewater Treatment", "Sanitary Chemistry", "Introduction to Water Supply and Treatment", "Wastewater Treatment", "Instrumentation and Controls", "Mathematics of Water and Wastewater Treatment", "Applied Microbiology", and "Introductory Chemistry". The recommended electives include: "Distribution Systems Maintenance" and "Collection Systems Maintenance".

### Related Degree Information

An Associate Degree for Water and Wastewater Technician can be earned by completing the certificate and graduation requirements.

Ventura College  
4667 Telegraph Road  
Ventura, CA 93003  
<http://www.ventura.cc.ca.us>

Contact  
Barbara Hoffman  
Department of Industry  
and Technology

Telephone  
(805) 654-6452  
Ext. 6372

### Organization

Ventura College's wastewater program is administered by the Department of Industry and Technology.

### Program Description

Ventura College offers a program of study leading to a certificate of achievement in Water Science: Wastewater Option. The goal of this program is to prepare individuals for a career as a wastewater treatment plant operator or upgrade their skills if they are currently employed in the field of wastewater treatment. A certificate in Water Science: Water Option is also available.

The core courses for either option include: "Basic Water and Wastewater Systems", "Water Systems Instrumentation and Controls", "Water Quality Protection and Cross-Connection Control", "Water and Wastewater Hydraulics", "Motors and Pumps Maintenance and Operation", and "Water Chemistry and Bacteriology". An additional required course for either option include a selection of "Elements of Supervision" or "Water and Wastewater Management"(28 units total). For the Wastewater Option, two additional courses include: "Wastewater Treatment" and "Wastewater Collection". The Water Science: Water Option includes the same core courses and two additional courses: "Water Treatment" and "Water Distribution". Thus, one could easily earn certificates in both water and wastewater.

### Related Degree Information

An Associate Degree in Water Science can be earned by completing a certificate option and graduation requirements.

Yuba College, Lake County Campus  
15880 Dam Road Extension  
Clearlake, CA 95422  
<http://www.yuba.cc.ca.us>

Contact  
Ask about their  
Environmental Technology  
curriculum

Telephone  
(707) 995-7900

### Organization

The Yuba College Water/Wastewater certificate program is cataloged under Environmental Technology.

### Program Description

Yuba College's Lake County Campus offers a Certificate of Completion in Water and Wastewater Treatment. The certificate is designed to prepare students to pass the state examination for Grade I and II certification, and to provide the skills needed to advance in the field.

To earn this certificate, the student must complete a total of ten core courses and three additional electives. Core courses in this certificate program include: "Water Treatment Plant Operation", "Introduction to Wastewater Treatment", "Water/Wastewater Calculations", "Advanced Water Treatment", "Advanced Wastewater Treatment", "Educational Internship", "Basic Composition/Reading", "Analytical Reading", "Elementary Algebra", and "Introduction to Microcomputers" (37-48 units total).

### Related Degree Information

An Associate Degree can be earned in Water and Wastewater Treatment by completing the certificate and graduation requirements.

## Community Colleges Offering One or More Wastewater Courses

	<u>Contact</u>	<u>Telephone</u>
<u>Bakersfield College</u> 1801 Panorama Drive Bakersfield, CA 93305 <a href="http://www.bc.cc.ca.us">http://www.bc.cc.ca.us</a>	Ann Boyce, Dean Applied Science & Technology Division	(805) 395-4522
<u>Chaffey College</u> 5885 Haven Avenue Rancho Cucamonga, CA 91737-3002 <a href="http://www.chaffey.cc.ca.us">http://www.chaffey.cc.ca.us</a>	Environmental Technology Department	(909) 941-2387
<u>College of the Canyons</u> 26455 Rockwell Canyon Road Valencia, CA 91355 <a href="http://www.coc.cc.ca.us">http://www.coc.cc.ca.us</a>	Jodi Walker Office of Professional Programs	(805) 259-7800 Ext. 3364
<u>College of the Sequoias</u> 915 South Mooney Boulevard Visalia, CA 93277 <a href="http://www.sequoias.cc.ca.us">http://www.sequoias.cc.ca.us</a>	Industry and Technology Division	(559) 730-3777
<u>Merced College</u> 3600 M Street Merced, CA 95348 <a href="http://www.merced.cc.ca.us">http://www.merced.cc.ca.us</a>	Science, Math & Engineering	(209) 384-6381
<u>Sacramento City College</u> 3835 Freeport Boulevard Sacramento, CA 95822 <a href="http://www.scc.losrios.cc.ca.us">http://www.scc.losrios.cc.ca.us</a>	Douglas Stinson Mechanical-Electrical Technology	(916) 558-2278 (916) 558-2491
<u>Santa Rosa Junior College</u> 1501 Mendocino Avenue Santa Rosa, CA 95401 <a href="http://www.santarosa.edu">http://www.santarosa.edu</a>	Applied Technology	(707) 527-4603

## Universities Offering Wastewater Training or Technology Courses

	<u>Contact</u>	<u>Telephone</u>
Office of Water Programs <b>California State University, Sacramento</b> 6000 "J" Street Sacramento, CA 95819-6025 <a href="http://www.owp.csus.edu">http://www.owp.csus.edu</a>	Dr. Ramzi J. Mahmood, Director Or Dr. Kenneth D. Kerri, Consultant (former director)	(916) 278-6142

The Office of Water Programs at California State University, Sacramento (CSUS) offers a series of self-study manuals and videos in water and wastewater treatment. Students study at their own pace, complete the test for continuing education units (CEUs) for each of the volumes, and mail it to CSUS for grading and comment. These CEUs are necessary for those individuals who wish to take State of California wastewater treatment plant operator certification exams. Lower division credit may also be awarded from CSUS.

The wastewater course titles are: "Small Wastewater System O & M, Volume I", "Small Wastewater System O & M, Volume II", "Advanced Waste Treatment", "Industrial Waste Treatment Volume I", "Industrial Waste Treatment Volume II", "Treatment of Metal Wastestreams", "Pretreatment Facility Inspection", "Operation and Maintenance of Wastewater Collection Systems, Volume I", "Operation and Maintenance of Wastewater Collection Systems Volume II", "VIDEOS: Collection System O & M Training Videos", "Collection Systems: Methods for Evaluating & Improving Performance" and other instructional aids.

These self-study courses are often referred to as the Ken Kerri courses. Dr. Kerri, former director and Sanitary Engineering Professor at CSUS, is currently a consultant for the Office of Water Programs at CSUS. These manuals are used statewide by many community colleges, and by individuals worldwide. To date, CSUS is the only university in the state offering such self-study courses in water/wastewater education and plant operator training.

<b>UC Riverside Extension Program</b> 1200 University Avenue Riverside, CA 92507 <a href="http://www.unex.ucr.edu">http://www.unex.ucr.edu</a>	Natural Sciences	(909
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The UC Riverside Extension Program offers a course in Industrial Wastewater Technology.

Industrial wastewater issues current technologies and regulatory aspects are examined in this course. Topics include on overview of federal, state and local standards; sources of industrial wastewater; pretreatment systems and technology; and discharge permits, responsibilities, monitoring and enforcement. Tours to a pretreatment system in a high-tech industry and state-of-the-art wastewater treatment facility are planned. Designed for pretreatment coordinators in private industry and regulatory agencies, environmental engineers, entry-level wastewater technicians, and others responsible for industrial wastewater management.

## Private Companies Offering Wastewater Training

	<u>Contact</u>	<u>Telephone</u>
<b>Arasmith Consulting Services (ACR)</b> 1298 Elm Street SW Albany, Oregon 97321	Amy Fries	(541) 928-5211 (800) 433-8150
<b>Donald E. Proctor, PhD, P.E.</b> 9003 Riverside Drive #E Sumner, Washington 98390	Donald E. Proctor	(253) 891-0466
<p>Dr. Donald Proctor, former Director of the State of California's Water Quality Control Institute (WQCI), has written a wastewater mathematics book entitled "Proctor's Logical Math Book". Dr. Proctor's book, while intended to be a supplement to other learning methods, can be utilized in a self-paced, self-taught program or individual study. The publication can be ordered directly from Dr. Proctor.</p>		
<b>Environmental Training Consultants (ETC)</b> 2231 Autumn Drive Oceanside, CA 92056	Chris Smith	(760) 630-9120
<b>Operator Certification Training, Inc.</b> PO Box 332 Gladstone, Oregon 97027	Robert A. Funk	(503) 650-5259 (888) 863-8916
<b>Wastewater Technology Trainers (WTT)</b> 204 North El Camino Real, Suite E-315 Encinitas, CA 92024	Keith Boger	(760) 753-2035 fax (760) 944-9494
<b>W. L. Troxel and Associates</b> 5791 Jadeite Avenue Alta Loma, CA 91737	W. L. Troxel	(909) 989-9983

## Miscellaneous Wastewater Training Opportunities

### **City of Riverside**

Water Quality Control Plant  
5950 Acorn Street  
Riverside, CA 92504

#### Contact

Operations Manager

#### Telephone

(909) 351-6187

A volunteer wastewater treatment plant operator program is offered at the City of Riverside's Water Quality Control Plant (Wastewater Plant).

To be considered for this program, the volunteer must meet certain basic criteria. The volunteer must be enrolled in a wastewater course either in a college or a home study program. The volunteer must have a high school diploma or its equivalent. The volunteer must also possess a valid California driver's license.

Volunteers must pay the required fee (currently \$50.00) to obtain a State of California Operator-in-Training (OIT) certificate. Volunteers work as OITs and gain experience credit toward becoming certified as a Grade I wastewater treatment plant operator in the State of California. Volunteer OITs are required to work a minimum of 10 hours per week.

Volunteer OITs work under the supervision of a certified operator in various areas of the treatment plant and although they are assigned tasks that an OIT would do, most of their duties are of a housekeeping nature. Volunteers work in 18 week segments and then are evaluated. A satisfactory evaluation is necessary in order for the volunteer to continue in the program.

### **City and County of San Francisco**

Stationary Engineers, Local #39, IUOE  
560 Barneveld Avenue  
San Francisco, CA 94124

#### Contact

Jim Lunsford

#### Telephone

(415) 285-3939

The City and County of San Francisco in cooperation with Stationary Engineers' Union, Local #39, has an apprenticeship program. Individuals in this four-year program are apprentice stationary engineers (wastewater plant operators). The apprentice pays the fee required for the OIT certificate. Apprentices are under the immediate supervision of qualified journey-persons and learn wastewater operations and maintenance as well as selected laboratory functions. Satisfactory completion of the required wastewater training classes is required in order to qualify for promotion to journey-person stationary engineer. Training classes are held in Local #39's training room and at San Francisco City College. The apprentices are also expected to pass the State of California Grade II wastewater operator certification exam during their apprenticeship.

<b>Dublin-San Ramon Services District</b> Wastewater Treatment Plant 7399 Johnson Drive Pleasanton, CA 94588	<u>Contact</u>	<u>Telephone</u>
	Rob Fowler Instructor	(925) 846-4565 Ext. 124
	Robert Anderson Instructor at Field Services Division	(925) 828-7897 Ext. 104

The Tri-Valley (Dublin-San Ramon-Pleasanton) Regional Occupation Program (ROP) offers a program of study in Water Pollution Control. This program is held at the Dublin-San Ramon Services District Wastewater Treatment Plant in Pleasanton.

The mission of Tri-Valley ROP Water Pollution Control course is to develop a student who is vocationally skilled, industry-wise, and marketable as an employee in the wastewater field.

Basic algebra is essential and chemistry desirable as prerequisites for this program. California State University, Sacramento's self-study manuals "Operation of Wastewater Treatment Plants, Volume I and II" are used as textbooks in this program.

In addition to classroom studies, students are expected to work a total of 540 hours during four 9-week quarters. Students perform actual operation and maintenance of wastewater treatment plant under the direction of plant personnel. Students tend machinery and equipment connected with biological, chemical, and physical treatment processes, read and interpret charts, flowmeters, and other gauges, collect samples, perform process tests, and other related duties.

Students are prepared for entry level employment as a wastewater treatment plant operator.



## California Water Associations

<b>California Water Environment Assn. (CWEA)</b> 7677 Oakport Street Oakland, CA 94621 <a href="http://www.cwea.org">http://www.cwea.org</a>	<u>Contact</u> Lindsay Roberts	<u>Telephone</u> (510) 382-7800
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<u>Name of Local CWEA Section</u>	<u>Contact</u>	<u>Telephone</u>
Central San Joaquin (CSJ)	David Watson	(209)436-6616
Colorado River Basin (CORBS)	Beth Amheiser	(760) 323-8166
Desert & Mountains (DAMS)	Robert Rennison	(909) 338-1751
Los Angeles Basin (LABS)	Geno Rapagna	(949) 940-8800
Monterey Bay (MB)	Carl Klein	(831) 883-1118
North Coast (NC)	Tracy Wyhlidko	(707) 441-4362
Northern San Joaquin (NSJ)	Glenn Hermanson	(916) 355-8644
North Sacramento Valley (NSV)	Mark Sulik	(530) 895-4695
Redwood Empire (RED)	Jenny Bender	(415) 459-1455
		Ext. 143
Sacramento Area Section (SAC)	Kent Craney or	(916) 875-9202
	Keith Smith	(916) 875-9245
San Diego (SD)	Miriam McKenna	(619) 268-8080
		Ext. 148
San Francisco Bay (SFB)	Anita Labossiere	(415) 648-6882
		Ext. 1233
Santa Ana River Basin (SARBS)	Linda Lobsorado	(714) 540-4300
Santa Clara Valley (SCV)	Chuck Thomas	(650) 321-0384
Sierra Section (SRA)	Brad Stockine	(530) 583-3796
Tri-Counties (TRI)	Carrie Mattinely	(805) 684-7214
		Ext. 20

<b>California Rural Water Assn.</b> 8300 Fair Oaks Boulevard, Suite 302 Carmichael, CA 95608 <a href="http://www.calruralwater.org">http://www.calruralwater.org</a>	<u>Contact</u> Pat Conway	<u>Telephone</u> (800) 833-0322
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